Annual Report of Operations for Year 2016

To comply with NPDES General Permit No. WAG130000 for Federal Aquaculture Facilities and Aquaculture Facilities Located in Indian Country within the Boundaries of the State of Washington

NPDES # for your Facility:
WAG-130016

Facility & Owner Information

Facility Name:
Colville Tribal Hatchery

Operator Name (Permittee):
Colville Confederated Tribes

Address:
79 Tribal Hatchery Road
Bridgeport, WA., 98813

Email: jill.phillips@colvilletribes.com
Phone: (509) 686-9330

Owner Name (if different from operator):

Email:
Phone:

Best Management Practices (BMP) Plan

Has the BMP Plan been reviewed this year? ■ Yes ☐ No

Does the BMP Plan fulfill the requirements of the General Permit? ■ Yes ☐ No

Summarize any changes to the BMP Plan since the last annual report. Attach additional pages if necessary.

ICIS 1/19/17 JM

EPA General Permit WAG130000 - Annual Report

Operations and Production

Total harvestable weight produced in the past calendar year in pounds (lbs):	57,796
Pounds of food fed to fish during the maximum month: 7,523	

List the species grown or held at your facility and the annual production of each in gross harvestable weight. If fish were released rather than harvested, list the weight at time of release.

Species	Fish Produced	Receiving Water(s) to which Fish were Released	Month Released/ Spawned
Rainbow Trout	49,240	Bourgeau, Buffalo, Gold, La Fleur,Little Goose,North Twin,Round, Rufus Woods, South Twin, and Summit lakes	2-10/16
Lahontan Cutthroat Trout	108,210	Duley, Omak, and Soap lakes	3-4/16
Brook Trout	22,875	McGinnis and Owhi lakes	10/16

Fill in the table below with production numbers from the past year. List the **maximum** amount of fish on-site and the maximum amount of food fed **per month.**

Month	Total Fish (lbs)	Fish Feed (lbs)	Month	Total Fish (lbs)	Fish Feed (lbs)
January	30,934	5,855	July	20,430	4,951
February	30,937	4,503	August	30,061	6,628
March	29,948	7,026	September	38,674	7,523
April	26,105	5,268	October	19,267	2,685
May	18,813	4,076	November	17,263	3,464
June	15,855	4,084	December	22,904	5,389

Additional Comments:

Solid Waste Disposal

Describe the solid waste disposed of during the calendar year (including fish mortalities).

Type of Solid Disposed	Date Disposed	Location Disposed
Egg cull/mortality	4/27/16	Okanogan landfill
Fish mortalities-froze and disposed	4/27/16, 8/17/16, and 12/14/16	Okanogan landfill
Additional Comments:		

Fish Mortalities

Include a description and the dates of mass mortalities in the past year (more than 5% per week). Attach additional pages, if necessary. Include total mortalities from all causes.

Date	Cause of Deaths	Steps Taken to Correct Problem	Pounds of Fish
	NONE to Report that exceeded 5% per week		
Additional Comments:			

Noncompliance Summary

Include a description and the dates of noncompliance events (including spills), the reasons for the incidents, and the steps taken to correct the problems. Attach additional pages, if necessary.

Inspections & Repairs for Production & Wastewater Treatment Systems

Date Inspected	Date Repaired	Description of System Inspected and/or Repaired
1/12/16		Building and grounds inspection
7/12/16	No repairs necessary	Inventory equipment, inspect rearing vessels, inspect settling ponds and discharge areas

Aquaculture Drugs and Chemicals

Please indicate whether you used each drug/chemical **during the past calendar year.**
Describe the use of each drug/chemical in more detail on the following pages.

Used in the past year?	Drug or Chemical
☐ Yes ■ No	Azithromycin
☐ Yes ■ No	Chloramine-T: ***See additional reporting requirements on page 7***
☐ Yes ■ No	Chlorine
☐ Yes ■ No	Draxxin
☐ Yes ■ No	Erythromycin - injectable
☐ Yes ■ No	Erythromycin - medicated feed
☐ Yes ☐ No	Florfenicol (Aquaflor)
■ Yes ☐ No	Formalin - 37% formaldehyde: ***See additional reporting requirements on page 7***
■ Yes ☐ No	Herbicide - describe:
☐ Yes ■ No	Hormone - describe:
☐ Yes ☐ No	Hydrogen Peroxide: ***See additional reporting requirements on page 7***
■ Yes ☐ No	Iodine: ***See additional reporting requirements on page 7***
☐ Yes ■ No	Oxytetracycline
☐ Yes ■ No	Potassium Permanganate: ***See additional reporting requirements on page 7***
☐ Yes ■ No	Romet
☐ Yes ☐ No	SLICE (emamectin benzoate)
■ Yes ☐ No	Sodium Chloride - salt
☐ Yes ■ No	Vibrio vaccine
☐ Yes ☐ No	Other:
☐ Yes ☐ No	Other:

Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Parasite-S		Generic Name: Formalin	
Reason for use: Control fungus on eggs during incubation			
■ Preventative/Prophylactic ☐ As-needed	Total quantity of formulated product per treatment (specify units) 379 milliliters per treatment	Total quantity of formulated product used in past year (specify units): 11.1 gallons	
Date(s) of treatment: 1/1/16-12/31/16			Total number of treatments in past year: 111
Maximum daily volume of treated water: 17,280 gallons	Treatment concentration (specify units): 1:6,000 ppm	Duration and frequency of treatment(s): 15 min., daily until eggs hatch	
Method of application:	☐ Static Bath ■ Flow-through	☐ Medicated Feed ☐ Other (describe):	
Location in facility chemical was used (check all that apply):	☐ Raceways ■ Incubation building	☐ Ponds ☐ Off-line settling basin	☐ Other (describe):
Where did water treated with this chemical go? (check all that apply):	■ Discharged w/o treatment ☐ Settling basin	☐ Septic System ☐ Publicly owned treatment works	☐ Other (describe):
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: See calculations and details on page 7			

Brand Name: Tricaine-S		Generic Name: MS 222	
Reason for use: Fish anesthetic used during fish marking and vaccinations			
☐ Preventative/Prophylactic ■ As-needed	Total quantity of formulated product per treatment: 20 grams	Total quantity of formulated product used in past year (specify units):	
Date(s) of treatment: 2/16-10/16			Total number of treatments in past year: 17
Maximum daily volume of treated water: 1700 gallons	Treatment concentration (specify units): 0.20 grams/ gallon	Duration and frequency of treatment(s): as needed during marking or vaccination events, however, no more than 3 times dailiy.	
Method of application:	■ Static Bath ☐ Flow-through	☐ Medicated Feed ☐ Other (describe):	
Location in facility chemical was used (check all that apply):	☐ Raceways ☐ Incubation building	☐ Ponds ☐ Off-line settling basin	■ Other (describe): Marking trailer
Where did water treated with this chemical go? (check all that apply):	■ Discharged w/o treatment ☐ Settling basin	☐ Septic System ☐ Publicly owned treatment works	☐ Other (describe):
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Ovadine		Generic Name: PVP Iodine	
Reason for use: Disinfection of Eggs			
■ Preventative/Prophylactic ■ As-needed	Total quantity of formulated product per treatment (specify units) 81.3 ml for 1:100 dilution	Total quantity of formulated product used in past year (specify units): 1.4 gallons	
Date(s) of treatment: 3/15/16-10/30/16			Total number of treatments in past year: 65
Maximum daily volume of treated water: 17,280 gallons	Treatment concentration (specify units): 1:100 ppm	Duration and frequency of treatment(s): 60 minutes after fertilization (water-harden) and 10 minutes when receiving transferred eggs (surface disinfection)	
Method of application:	■ Static Bath ☐ Flow-through	☐ Medicated Feed ☐ Other (describe):	
Location in facility chemical was used (check all that apply):	☐ Raceways ■ Incubation building	☐ Ponds ☐ Off-line settling basin	☐ Other (describe):
Where did water treated with this chemical go? (check all that apply):	■ Discharged w/o treatment ☐ Settling basin	☐ Septic System ☐ Publicly owned treatment works	☐ Other (describe):
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use:			

Brand Name: Pendulum		Generic Name:	
Reason for use: Weed killer			
☐ Preventative/Prophylactic ■ As-needed	Total quantity of formulated product per treatment: 0.5 gallon	Total quantity of formulated product used in past year (specify units): 2 gallons	
Date(s) of treatment: 5-8/16			Total number of treatments in past year: 4
Maximum daily volume of treated water: 0	Treatment concentration (specify units):	Duration and frequency of treatment(s): as needed to control weeds	
Method of application:	☐ Static Bath ☐ Flow-through	☐ Medicated Feed spray areas by hand to control ■ Other (describe): ground weeds	
Location in facility chemical was used (check all that apply):	☐ Raceways ☐ Incubation building	☐ Ponds ☐ Off-line settling basin	■ Other (describe): facility grounds away from rearing vessels.
Where did water treated with this chemical go? (check all that apply):	☐ Discharged w/o treatment ☐ Settling basin	☐ Septic System ☐ Publicly owned treatment works	■ Other (describe): no water was treated
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: Treated areas are >100 feet from discharge areas.			

Aquaculture Drugs and Chemicals (cont'd)

Describe all drug and/or chemical treatments that occurred during the year. Fill out the information below for each drug or chemical, plus page 7 for water-borne treatments. Attach additional pages as necessary.

Brand Name: Virkon S		Generic Name:	
Reason for use: Disinfectant			
☐ Preventative/Prophylactic ■ As-needed	Total quantity of formulated product per treatment (specify units): 1.3 oz/ 1 gallon water	Total quantity of formulated product used in past year (specify units): 18.2 oz.	
Date(s) of treatment: 1/16-12/16			Total number of treatments in past year: 14
Maximum daily volume of treated water: none	Treatment concentration (specify units): 1:400 ppm	Duration and frequency of treatment(s): 10 minutes of contact time is sufficient to be effective against pathogens (bacteria and viruses)	
Method of application:	☐ Static Bath ☐ Flow-through	☐ Medicated Feed ■ Other (describe): used in footbaths for bio-security and to disinfect equipment	
Location in facility chemical was used (check all that apply):	☐ Raceways ■ Incubation building	☐ Ponds ☐ Off-line settling basin	☐ Other (describe):
Where did water treated with this chemical go? (check all that apply):	☐ Discharged w/o treatment ☐ Settling basin	☐ Septic System ☐ Publicly owned treatment works	■ Other (describe): evaporation
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: Mainly used to disinfect equipment (hand sprayed) to limit bacteria or viral exposure and used as a bio-security measure in footbaths at entrances to incubation areas.			

Brand Name: Pendulum		Generic Name:	
Reason for use: Weed killer			
☐ Preventative/Prophylactic ■ As-needed	Total quantity of formulated product per treatment: 0.25 gallon	Total quantity of formulated product used in past year (specify units): 2.5	
Date(s) of treatment: 5/16-9/16			Total number of treatments in past year: 10
Maximum daily volume of treated water: 0	Treatment concentration (specify units):	Duration and frequency of treatment(s): as needed to control weeds	
Method of application:	☐ Static Bath ☐ Flow-through	☐ Medicated Feed ■ Other (describe): spray areas by hand to control ground weeds	
Location in facility chemical was used (check all that apply):	☐ Raceways ☐ Incubation building	☐ Ponds ☐ Off-line settling basin	■ Other (describe): facility grounds away from rearing vessels.
Where did water treated with this chemical go? (check all that apply):	☐ Discharged w/o treatment ☐ Settling basin	☐ Septic System ☐ Publicly owned treatment works	■ Other (describe): no water was treated
Provide any additional information about how this chemical was used and/or special pollution prevention practices during use: Treated areas are >100 feet from discharge areas.			

Aquaculture Drugs and Chemicals (cont'd)

Additional Reporting Requirements for Water-Borne Treatments

- If a water-borne treatment was used during the calendar year, Permittees must include detailed records/calculations as an attachment to this Annual Report in order to demonstrate how the maximum effluent concentrations of solution and active ingredient were calculated for each chemical.
- EPA recognizes that water-borne treatments may vary in the volume of the vessels treated, concentration, quantity of product, etc. Permittees must provide the information listed in the following tables for a reasonable worst case (i.e., maximum effluent concentration) scenario, not for each individual treatment.
- Permittees must submit this information and calculate the maximum effluent concentration for each water-borne chemical used during the past calendar year.
- See also Appendix D for the Chemical Log Sheet.

Static Bath Treatments	
Tank Volume	Liters
Desired Static Bath Treatment Concentration	µg/L
Volume of Product Needed	Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: Active Ingredient: Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	Specify Units
Maximum % of Facility Discharge Treated	% of Total Discharge

Flow-Through Treatments	
Tank Volume	65.1 Liters
Calculated Flow Rate	15.14 Liters/Minute
Duration of Treatment	15 Minutes
Desired Flow-Through Treatment Concentration of Product	6,000,000 µg/L
Amount of Product to Add Initially	0.0252 Liters Product
Amount of Product to Add During Treatment	25.2 mL/Minute
Total Volume of Product Needed	0.378 Liters Product
Maximum Effluent Concentration of: 1) Solution and 2) Active Ingredient	Solution: 0.00001% Active Ingredient: 37% Formaldehyde (37 grams/100mL) Specify Units
Minimum Volume of Total (treated + untreated) Water Discharged from the Facility per day	9,841,000 Liters Specify Units
Maximum % of Facility Discharge Treated	0 % of Total Discharge

Changes to the Facility or Operations

Describe any changes to the facility or operations since the last annual report.

Signature and Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly evaluate and gather the information submitted. Based on my inquiry of the person or persons, who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Jill Phillips	Hatchery Manager
Printed name of person signing	Title
Jill Phillips	01/9/17
Applicant Signature	Date Signed

Submittal Information

Send the complete, signed information, along with any attachments, to the following address:

U.S. EPA Region 10, OWW-191

Washington Hatchery Annual Report

1200 Sixth Avenue, Suite 900

Seattle, WA 98101-3140

...Flow through treatment of Parasite-S - Formalin on eggs to control fungus during incubation.

Incubator tray measure: 14.5" x 18.5" x 2.0" to calculate Volume
= 0.28884 ft³ or 2.15 gallon

There are 8 trays in a series = 17.2 gallons

3.785 liters = 1 gallon 3.785 x 17.2 = 65.1 Liters Tank Volume

Flow rate per series of incubators is 4 gpm or 3.785 x 4 = 15.14 Liters per min

Desired concentration is 1:6,000 ppm 1 µg = 0.001

1 mg/L = 1 ppm 6,000 mg = 6,000,000 µg

Total Volume of Parasite-S needed for 15 minute treatment to eggs per series = 25.2 ml/minute or 378 ml per treatment.

378 mls x 1,000 mls/L = 0.378 Liters per series.

Total Minimum Volume of water (treated w/Parasite-S & untreated)

2,600,000 million gallons/day x 3.785 = 9,841,000 Liters/day

max. concentration

0.378 (V of product) x 3 series = 1.134 Liters/9,841,000 Liters/day
= 0.0001% concentration of Solution in Effluent

Formaldehyde is 37% or 37 grams of Formaldehyde in 100 mL Solution